## Adaptive Distributed Environment for Procedure Training, Phase II



Completed Technology Project (2005 - 2007)

## **Project Introduction**

The ADEPT project aims to improve the state-of-the-art with respect to capabilities and costs of scenario-based training in support of future space exploration missions at NASA. The key features of ADEPT will include: (1) a scenario-based intelligent tutoring system focused on the problem of training systems-operators on how to think through operational contingencies; (2) reliance on explicit representations of target mental models for the systems students are being trained to operate; (3) incorporation of an extensive authoring tool suite to lower costs of training development; and (4) use of multi-modal tutor-student dialog interaction to get at student decision rationale. Innovations include (a) a new instructional design methodology and supporting tools tuned to the demands of scenario-based contingency response training; (b) application of systems models to training in operations contingency reasoning as opposed to diagnosis or design; (c) development of tools that exploit systems models to support conceptual design of appropriate training scenarios, and development of interactive tutorial dialogs; and (d) attacking cost, quality, flexibility, and longevity issues through an overall training systems design (and project execution plan) emphasizing openness to integration of existing and future components such as simulators, user interfaces, and authoring tools.

#### **Primary U.S. Work Locations and Key Partners**





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# Organizational Responsibility

#### Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

#### **Lead Center / Facility:**

Johnson Space Center (JSC)

#### **Responsible Program:**

Small Business Innovation Research/Small Business Tech Transfer



## Small Business Innovation Research/Small Business Tech Transfer

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| Organizations<br>Performing Work | Role         | Туре     | Location   |
|----------------------------------|--------------|----------|------------|
|                                  | Lead         | NASA     | Houston,   |
|                                  | Organization | Center   | Texas      |
| Stottler Henke                   | Supporting   | Industry | San Mateo, |
| Associates, Inc.                 | Organization |          | California |

| Primary U.S. Work Locations |       |
|-----------------------------|-------|
| California                  | Texas |

## **Project Management**

**Program Director:** 

Jason L Kessler

**Program Manager:** 

Carlos Torrez

# **Technology Areas**

#### **Primary:**

- TX13 Ground, Test, and Surface Systems
  - □ TX13.4 Mission Success Technologies
     ☐ TX13.4 Mission Success
     ☐ TX13.4 Mission S
    - □ TX13.4.2 Team
      Preparedness and
      Training